REMARKS

These remarks are submitted in reply to the Office Action dated April 20, 2007. Applicant respectfully requests reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

Claim 1 remains in the present application. Claims 2 - 22 8 have been cancelled. Based on the remarks herein, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections.

I.   Claim 8 was objected to for a formality and rejected as being directed to non-statutory subject matter. Claim 8 has been cancelled rendering this rejection moot.

II.   Claim 1 was provisionally rejected on the ground of nonstatutory obviousness-type double patenting. Applicant submits with the present response a terminal disclaimer and submits traverses this rejection.

III.   Claims 2 – 22 were rejected under Section 101 statutory-type double patenting. Applicant has cancelled claims 2 – 22 rendering this rejection moot.

IV.   Claims 1, 2, 7 – 10, 15 – 17, and 22 were rejected under 35 U.S.C 102(b) as being anticipated by Lee et al. Claims 2 – 22 have been cancelled rendering this rejection as it relates to 2, 7 – 10, 15 – 17, and 22 moot. Regarding the rejection of claim 1, Applicant respectfully submits the method in cited published paper is quiet different from the rate-1 space frequency block code claimed in claim 1 and set forth in painstaking detail in the present application.

Applicant submits that at least the following are significant differences between the cited published paper and the present application:

(1) The present application's SFBC can achieve rate-1 for arbitrary number of transmit antenna case, but the method in cited paper can only achieve rate-1 for 2 transmit antenna case. There is because the cited paper uses existing space time block codes to do space-frequency encoding. And space time block codes can only have rate ¾ at most for transmit antenna number greater than 2;

(2) The present application's SFBC can exploit the frequency selectivity inherent in the channel, which the cited art method can not thereby distinguishing the rate-1, space-frequency block code.

(3) The present application's SFBC can achieve full space-frequency diversity of M*N*L, where M is number of transmit antenna, N is number of receiver antenna, L is order of frequency selective channel, but their method can only achieve diversity order of 2*N.

In short, as long as the channel is frequency selective and/or the number of transmit antenna need to be larger than 2, our SFBC is significantly distinguishable and better than the method in cited paper.

V.   The remaining rejections are related to on of claims 2 – 22 and as these claims have been cancelled, these rejections have been rendered moot.

CONCLUSION

      In light of at least the foregoing amendments and remarks, Applicant respectfully submits that claim 1 is in condition for allowance and such action is earnestly solicited. *The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.*

      Please charge any shortages and credit any overcharges to our Deposit Account number 50-0221.

Respectfully submitted,

Date: August 9, 2007   by:/s/James S. Finn/Reg. No., 38,450/
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